

Mitochondria: A Practical Approach

Edited by V.M. Darley-USmar, D. Rickwood and M.T. Wilson

IRL Press; Oxford, 1987

340 pages. £18.00, \$34.00 (paperback)

I measure the usefulness of a techniques book like this one by the speed with which it disappears from my office bookshelf into the laboratory. By that criterion this mitochondrial cookbook promises to be extremely effective. It is packed with handy recipes, mostly tried and tested methods for the manipulation of mitochondria, with explanations to help the beginner. The study of mitochondria is now a mature field, so large that even practitioners in one area, such as bioenergetics, may be unfamiliar with the techniques used in another, such as genetics.

The book covers mitochondria from various types of animal tissue, and also yeast and plants. The emphasis is on preparative methods for mitochondria, and the electron-transfer complexes, enzymes and genes that they contain. Chapters cover the isolation of mitochondria and measurements of their activity; electron microscopy; methods for measurement of transport of ions and metabolites; sub-fractionation of respiratory chain complexes and their re-incorporation into membranes; isolation

and assay of citric-acid-cycle enzymes; isolation of mitochondrial DNA; selection and manipulation of yeast and fungal mutants; in vitro transcription and translation; and the import of proteins into mitochondria.

Inevitably, in a book which offers such a breadth of coverage, there are omissions. In most cases it does not go into the specialized techniques used to study mitochondrial components, such as rapid-reaction spectroscopy. There is little on ubiquinone or other mitochondrial lipids. To find more on these one must delve into *Methods in Enzymology*. I found the index at the end too brief to be reliable; to find your way around, use the list of contents.

The editors have taken trouble to maintain an even level of presentation in this multi-authored volume. Sufficient detail is given to take the mystery out of the methods, so that the reader feels emboldened to actually go and try them.

R. Cammack

Lymphocytes: A Practical Approach

Edited by G.G.B. Klaus

IRL Press; Oxford, Washington, 1987

xxi + 261 pages. £17.00, \$32.00 (paperback); £26.00, \$47.00 (hardback)

This recent addition to the rapidly proliferating IRL Practical Approach series fully lives up to the standard set by its predecessors, and it is a tribute to the editor that 11 different chapters contributed by a total of 28 different authors come together to make a coherent whole.

The methods covered range from procedures as basic as the preparation of lymphocytes from blood and lymphoid organs through to techniques for cloning T and B lymphocytes and sophisticated analysis of effector functions. Three chapters describe the preparation of lymphocytes and the